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ABSTRACT

Opening remarks by Hans-Peter Geh, President of the International Federation of Library Associations (IFLA), address the meeting theme, "New Horizons of Librarianship towards the 21st Century," with emphasis on the need for international cooperation as technology advances and libraries expand to become large information centers. Remarks include brief discussions of the needs of Third World countries, the role of UNESCO (United Nations Educational, Scientific, and Cultural Organization), and a few of IFLA's core programs, primarily the Preservation and Conservation (PAC) program. Three additional papers include: (1) "Science Information System--A Challenge towards an Integrated Information Utility," in which Hiroshi Inose of Japan discusses an information utility designed to enhance information services for academic communities; (2) "The Library and Information Dimensions of the North-South Dialogue--Some Thoughts on the Threshold of the 21st Century," in which Hedwig Anuar of Singapore examines the history of libraries in Asia, the development of literacy and education, problems of publishing in the Third World, and the opportunities and threats presented by information technology; and (3) "The Library and the Times," in which Yu Guangyuan of the People's Republic of China considers the concept of books as information carriers and the function of libraries as providing full utilization of books. (KM)

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IFLA

General Conference

Opening Ceremony and Plenary Session

Tokyo, Japan

August 1986

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IFLA GENERAL CONFERENCE, TOKYO

1986

Opening Ceremony

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Presidential Address

by

H.P. GEH

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Presidential Address by Mr. Hans-Peter Geh

I want to extend a cordinal welcome to all of you who have come here from north, south, east, and west to the 52nd IFLA General Conference.

This is the second IFLA Conference, following Manila 1980, within a short period which is taking place in an Asian country. This is a sign of the importance IFLA places on librarianship in this region.

We are meeting in a country which holds a very special attraction for many of us as the land of the rising sun, of the cherry and lotus blossoms, with its deep ties to nature and tradition, and its commitment to modern technology and progress.

Marco Polo (1254 - 1323) brought the first news of Japan to Europe, news which, however, did not come from first hand experience but was based on reports and stories which circulated in the Chinese empirial court. It was, in fact, fascinating tidings which made their way from the Land of Gold to the western world and were later impetus for Christopher Columbus' voyage out in search of the western route to this promised land. However, what he discovered was neither Japan nor India, but America.

For one who delves a bit deeper into the history of Japan it is a most awesome fact that a people could remain alone on the islands for centuries with nearly no foreign influence, retaining a singular language, and, after the opening up of the land in the 1860's, make such overwhelming advancements in a wide variety of fields. The modern technology of that time, to name just one example, was, thus adapted and further developed in such an admirable way that today Japan has taken a leading position in the world in the area of technology and has become one of the largest export countries. As outsiders we can only respectfully verify the fact that Japan, despite such dramatic changes in the past 100 years, has been able to retain its old traditions and virtues.

It appears to me symbolic in this connection also that the opening ceremony of our conference it taking place in the National Theatre. It has been furnished with the most modern technical equipment, and is yet at the same time used primarily for performances of the century old theatre art.

Within this setting we want to deal with the future-oriented, general theme of our conference, "New Horizons of Librarianship towards the 21st Century."

Concerning the time up until the 21st century, there will definitely be many far-reaching changes in the field of librarianship due to the continously growing need for specialized information and the constant development in technology. Libraries will no longer just be places of use and storage for books and other media. They will in fact be expanded to large information centers which will make use of the electronic and optical means of processing and communication in increasingly larger numbers.

Through this process of development, the libraries will expand accordingly from their present role as information collectors and providers of information to becoming producers of information and information processors.

In addition, the electronic publishing will place the library in a totally new situation requiring a closer cooperation with important producers of information, for instance in the publishing field.

Moreover, the optical computers are already on our doorstep. They are able to combine information intelligently, to interpret it as well as to derive logical conclusions. And on top of that, the functioning speed will be increased to a factor of 1000.

Nevertheless, the prophesized electronic library still needs many years to reach completion, especially because the medium of the book will, in all probability, remain dominant in the future.

In summing up I should like to quote the old Greeks who had already recognized that "the only thing which is permanent is change".

With all of this change and development, an intensive international cooperation is imperative. The major concerns, for example, are that international data exchange standardizations be undertaken, and in the same manner the coordination of the technical requirements. This remains the primary duty of our core programme Transborder Date Flow.

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Let me add a special aspect in this connection. The need for information per person is growing. However, this development is being accompanied by a lack of people's attention as well as by the decrease in the quality of the offered information. Communication media like radio, TV, video, and light fiction are dominating the information and leisure fields in an increasing number. For this reason we must offensivly combat this trend in our libraries with an even stronger measure and counter it with good literature and videos which can also offer something meaningful to ponder in contrary to the multitude of empty stations and programmes and the daily frustrations of life. In such a way, the book should be a friend in man's search for identity.

One last note to this theme, in spite of all activities, technical developments, and profuse changes, the library should remain what it once was, the site of intensive, intellectual work, a haven for contemplation and meditation which plays such an important role here in our host country.

With all of these new conceptional and technical developments, we in IFLA must continue to demonstrate our special responsibility and solidarity with regards to the countries of the Third World in an active way where the field of librarianship is only in developmental stages at this time. In this realm we are still concerned in many ways, as we heard in 1984 at the opening of the 50th IFLA General Conference in Nairobi from the Kenyan Vice President in such an impressing way, with the battle against illiteracy, the development of the publishing and library fields as well as the basic maintenance of literature. Precisely on this point we have a very special responsibility, on one hand through active, professional support of the committed efforts of our colleagues in these countries and on the other to offer material aid. In addition, there is the fact that relatively few representatives from the Third World have been able to participate here in the General Conference in Tokyo, a fact that also deeply affects the officers. The numerous letters requesting aid which I received in this connection have deeply touched me, the more so because we cannot offer any help due to the lack of sufficient funds. For this reason I would like to call urgent attention to all IFLA members to contribute their share to the Regional Development Fund which has been set up for the work and development in the Third World.

In all our work in the Third World we need, of course, the continued support of numerous pertinent organizations and institutions and especially the cooperation with UNESCO. We are all very pleased that IFLA has attained a prestigious position with UNESCO, as demonstrated by the representation of UNESCO here in Tokyo. We, of IFLA, are very committed to a close cooperation with UNESCO, especially since common concerns in the Third World are a high priority for both of us. We are especially indebted to the General Information Programme of UNESCO, which has yielded targeted and efficient ways for the various support of our activities for which we are very thankful. We recognize them all the more since UNESCO is forced to make drastic economic measures. The cooperative achievements, as we have it confirmed again and again, find fertile ground and are thereby an extremely decisive support for the effected.

In this connection I also do not want to forget to mention the support that UNESCO gives to our core programmes. Besides UBC and UAP, our new programme Preservation and Conservation (PAC) is also receiving support.

As many of you know, our new core programme PAC, which is concerned with the preservation of our intellectual and cultural heritage of the past, was launched during the International Conference on Preservation and Conservation of Library Materials from 7th-10th April 1986.

This conference served to analyse the international situation, to make libraries and governments aware of these areas and to discuss appropriate preservation and conservation measures.

Facts and numbers which were imparted by experts from over 50 countries at this conference demand serious and concerned attention. It is not just medieval manuscripts and old books which are endagered by environmental influences, ink corrosion, and usage, but, to an even greater extent, the books from the 19th and 20th centuries which are printed on acidated paper.

As a detailed study on the holdings of the Library of Congress in Washington has shown, 25 % of the books on acidated paper, which has been used since the beginning of the 19th century, have become brittle and thereby will, sooner or later if nothing drastic occurs, be exposed to decay.

In many countries the problem has not yet been recognized as clearly and the American figures should certainly not be generalized. Nevertheless, the time has arrived for many libraries of the world, and not only those in tropical countries, to take the necessary precautionary measures with regard to temperature and humidity, to preserve and conserve older collections with expedient measures, and to pay increased attention to the protection of books in desaster control planning as well as to implement mass deacidification and paper strengthening processes.

Conservation is, doubtlessly, the task, first of all, of the individual library, but it is also a national and international duty. For this reason IFLA has committed itself to give this Herculean and complex problem special priority. The recommendations made at the Viennese conference which were recently published clearly indicate the necessity of international cooperation as the only measure to ensure success.

In IFLA's PAC Programme, retrospective as well as prospective measures in international and national realm have been taken into consideration. The concern here is for the physical maintenance of the original and also for the protection of the text through secondary media. While the traditional and recent methods (for example, the paper splitting process developed by the Deutsche Bücherei in Leipzig) have been able to preserve older holdings and while the mass deacidification procedures and paper strengthening processes should maintain books from the 19th and 20th centuries, the area of secondary media is presently offering alternatives in the form of microforms, magnetic media and the digital video disc which contains an enormous storage capacity and is currently being tested for this purpose.

We are concerned that an immediately utilisable method be found in the newest technology for the preservation of texts since the urgency of the problem doesn't allow the time to wait for the ideal means.

Here, too, exists the necessity of setting up international standards as well as bibliograyphic control of the secondary media: On one hand to avoid unnecessary duplication and on the other, to indicate where pertinent resources exist.

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Above all it's important to exert an influence on the paper industry with the goal of producing only acid-free paper for the production of books. This will be no simple procedure in many countries as only a small percentage of the paper produced is used in the production of books.

UNESCO and ICA have also shown a major interest in IFLA's PAC programme. At an experts seminar of IFLA and ICA in Veldhoven, Netherlands, in October 1985, where representatives from the Fédération Internationale de Documentation also participated, concrete steps and projects were decided upon which will be supported through the assistance of UNESCO, to whom we are very appreciative. Further planning was done at meetings between the officers of IFLA and ICA. We are concerned here with, for example, an international directory of conservation facilities, the study of conservation methods, the exchange of secondary media, and the execution of training courses.

Let me close with a word to the international year of peace.

All of our diligent work and effort within IFLA can only be complete when peace exists in our world. Since peace is not only of existential meaning for peoples but also for libraries: libraries can only blossom and thrive in the time of peace.

The works of the great authors of many countries stand next to one another in harmony in our libraries. What they have to offer speaks to all of us.

May these books which, as was once said, represent "printed humanity", serve in their thematic variety as the model for the peaceful coexistence in our world. And may they be, above all, a sign of the free exchange of information, of justice, and of the safeguarding of human rights.

With the hope that world peace will be possible for all times, I declare the 52nd IFLA General Conference in Tokyo 1986 open.

IFLA 1986

IFLA GENERAL CONFERENCE, TOKYO

PLENARY SESSION

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Science Information System

- a challenge towards an Integrated Information Utility

by

Hiroshi INOSE
Tokyo, JAPAN

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Science Information System

- a challenge towards an Integrated Information Utility

Hiroshi Inose
(Director General, National Center
for Science Information System)

1. Introduction

In view of drastic increase in the amount of science information and of accelerated dependency of research activities upon information, enhancement of information services for academic communities is urgently called for.

First of all, considering the facts that the amount of books and periodicals collected by university libraries constitute a significant part of the nation's bibliographic resources, and that these bibliographic resources have not always been fully utilized due to the lack of holdings information and of interlibrary loan system, a union catalogue database should be constructed to permit nation-wide bibliographic control and to provide efficient library services including interlibrary lending.

Secondly, information retrieval services have to be enhanced by implementing databases to cover extremely broad area of scientific studies that ranges from various disciplines of natural sciences to a great variety of subjects in social sciences and humanities. Taking into account of the fact that each of these diversified scientific fields tends to be narrower and deeper, majority of these databases are quite unlikely to be commercially lucrative. In other words, bibliographic databases and fact databases for academic communities have to be constructed, maintained and served by the endogenous efforts of academic communities themselves. It should also be noted that bibliographic databases should be closely combined with the union catalogue database so as to provide access to the primary information.

Thirdly, an advanced information and communication environment has to be created by taking full advantage of powerful information technologies, to provide an integrated information utility by which every researcher can have access to a great variety of databases and large computing facilities, and can exchange information with the others through teletex, facsimile and teleconferencing. This requires the construction of a nation-wide network system that includes optical fibers and packet switching centers.

And in the long run, the integrated information utility should be capable of delivering copies of original documents to researchers' premises by retrieving image database that utilize optical disks and by transmitting the retrieved image by means of high-speed digital facsimile.

Based upon these thoughts, the concept of the Science Information System was first proposed by the National Science Council of Japan on 29th January, 1980, in response to the inquiry of the Minister of Education, Science and Culture. It was conceived as a nation-wide information system that provides the university community in Japan with science information in various fields of natural and social sciences as well as humanities, by way of a nation-wide digital network that links university libraries, computer centers and user terminals.

The present paper is intended to describe the historical background and the concept of the Science Information System as well as its research and development activities with particular reference to original document database system.

2. Historical Background

As the first step for the deployment of Science Information System, the Center for Bibliographic Information (CBI) was established in April, 1983 at the University of Tokyo by the reorganization of the then Research Center for

Library and Information Science (RCLIS). The major aim of the RCLIS since its inauguration in 1976, was to construct a union list of scientific periodicals in Japanese as well as in European Languages in cooperation with university libraries. This work has been continued by the CBI and integrated into the Online Cataloguing System that covers not only periodicals but also monographs. This system is based upon a shared cataloguing concept and with cooperative efforts of university libraries, constructs and maintains a union catalogue database in order to provide nation-wide bibliographic control, retrieval and interlibrary lending.

For the purpose of online cataloguing at the university libraries, the CBI developed the Cataloguing Workstation which is an intelligent terminal that supports the use of a large character set. As shown in Table 1, Roman alphabets, diacritical marks, Japanese Kana characters and associated symbols are entered by manipulating corresponding keys. In addition, for entering some 7000 Japanese Kanji characters, Kana to Kanji or Roman alphabet to Kanji conversion has been implemented. In all, some 7800 characters, including Greek and Cyrillic, can be handled by this terminal.

The CBI also developed communications software which includes the Extended Network Virtual Terminal Protocol and the User Interface Program. The former is to support communication by way of a packet-switched network, and the latter is to permit the Cataloguing Workstation to have access to the CBI's Cataloguing System. Fig. 1 shows the university libraries being connected online to the CBI as of April 1986.

The computer system of the Center for Bibliographic Information, which was introduced in March 1984, consists of three central processors each with a throughput of 18 Mega-instructions per second, two sets of main memories each with a capacity of 64 Megabytes, magnetic disk files with a total capacity of 70 Gigabytes, a mass storage system with a capacity of 102 Gigabytes and a highspeed laser-beam printer with a printing speed of 15,200 lines per minute.

The system also has a communication system that includes two front end processors having X.25 interface with a data rate of up to 48 kilobits per second.

Union catalogue files that consist of bibliography and holdings files for Japanese and foreign serials and monographs, as well as referral files that include national and trade MARCs, and name and title authority files; have been implemented in the computer system. Table 2 shows the union catalogue databases of serials which have been compiled and implemented. A new version of the union catalogue for serials in European languages that combines natural and social sciences as well as humanities is being compiled and will be completed by, March 1988. It is estimated that this catalogue includes some 100,000 titles and 800,000 holdings. The union catalogues shown in Table 2 have also been published in book form, and their customized version have been provided to university libraries for inhouse use.

Effective on April 5, 1986, the Center for Bibliographic Information has been reorganized as the National Center for Science Information System and given an independent status. The number of personnel as well as the annual budget have been doubled. It is expected that within several years, the number of personnel will reach one hundred and the annual budget will amount to some 20 million U. S. dollars.

3. Concept

As has been described, the objective of the Science Information System is to bring about a right environment for information and communication among university researchers in various disciplines, by fully utilizing advanced information technologies that include relational databases, digital networks, intelligent terminals and large-scale computers.

Specifically, the System's functional features are the following.

(1) Bibliographic Utility

Based on a shared cataloguing concept, a nation-wide union catalogue database is formed with cooperative efforts of participating libraries. Authority control of names and uniform titles is conducted and inter-library loan service is provided.

(2) Online Information Retrieval

By constructing databases for various scientific disciplines in cooperation with research groups and by introducing databases formed domestically as well as abroad, online information retrieval service is provided through a nation-wide digital network.

(3) Information and Communications Utility

Teletex, facsimile, broadcasting, teleconferencing and other services are provided by way of a nation-wide digital network that consists of wide area communications facility as well as local area networks.

In addition to the above, an online, full-text retrieval service will be provided in the future that employ optical storage devices and high-speed digital facsimile in storing and transmitting original document image. The following section describes and experimental system constructed and operated to demonstrate the feasibility of this service. Also in the future, the digital network will be extended overseas to provide services to the international scientific community.

Organizationally, the Science Information System consists of a number of university libraries, computer centers and user terminals connected by way of a nation-wide digital network to the National Center for Science Information System. The aim of the National Center is to function as the nucleus of the Science Information System by planning and coordinating whole activites, constructing and operating a union catalogue database, providing information retrieval services, deploying and operating a nation-wide digital network, conducting research and development; and providing education, training and

public relations programme.

4. Research and Development

The research and development activities, which have been conducted by the Center for Bibliographic Information (CBI) and are now carried on by the National Center for Science Information System (NACSIS), may be categorized into two, namely, developmental activities for immediate usage and research activities for future services.

The activities of the former category include the development of cataloguing workstation, communications protocols and title change map for union list of periodicals. The activities of the latter category include software research for maintaining integrity and authenticity of bibliographic information and systems research for realizing online libraries. Due to the limited time and space available, this section will be devoted to outline the research on the feasibility of online libraries.

One of the ultimate objectives of the application of information technologies to the library service will be the realization of an online library which is capable of providing online, to many users sattered in a broad area, with the retrieved images of original document information such as pages of books, periodicals and other printed and hand written documents, diagrams, sketches and photographs. If realized, the users would no longer have to visit libraries holding the documents they wish to read, or have to wait the copies of documents to be delivered by interlibrary lending. The users would also be able to interactively select the original documents they need over communication lines.

Basic studies in the above direction were conducted at the University of Tokyo over the past ten years with the financial assistance of the Grant-in-Aide for Scientific Research of the Ministry of Education, Science and Culture.

The results, which will be outlined here, have then been transferred to the CBI for evaluation and realization.

Major factors for the realization of an online library that require special consideration include the following.

(1) Storage media

It is clear that an online library has to deal with a very large amount of information in the form of visual pattern. This requires the choice of an appropriate storage medium with high storage density and low cost. Critical evaluation of prospective media was made and concluded as follows. Although microfiche is the cheapest medium, large access time, needs of high-resolution photo-electric conversion and other factors rule out it use. High cost of magnetic disks as well as large access time of mass storage systems (MSS) are considered to be prohibitive. Optical disks therefore are chosen as the most promising medium because of their high storage capacity and reasonable access time. Commercially available optical disks, however, are designed mainly for the reproduction of television and movie programs. Hence, a new type of optical disk storage was developed having direct-read-after-write (DRAW) capability as well as random access capability to any one of some 20,000 pages being stored.

(2) Information retrieval

An online library required the functions of bibliographic retrieval and original document retrieval to be combined through an appropriate control function so that selective access to the particular pages of original documents can be made in accordance with the result of bibliographic retrieval. Hence, an integrated database management function has been developed to combine a conventional bibliographic database management system with a specifically-designed original document database management sytem by means of a user interface that include a data-

base access method.

(3) Communication Control

The system is required to have the capability of interactively communicating with a number of remote terminals simultaneously, and transmitting digitized and redundancy reduced original document information together with alphanumeric data. A composite communication protocol has therefore been developed that closely combines an interactive TSS protocol for information retrieval and a file transfer protocol for trasmitting original document information. Close coordination between communication control and the database access method has been implemented.

(4) Remote Terminal

A remote terminal is required to have the capability of interactively communicating with the online library, receiving and recording alphanumeric data as well as original document information in the form of a hard copy. An experimental terminal has been developed by combining a key-board display and a facsimile receiver by means of a minicomputer and associated buffers.

(5) Redundancy reduction

For the purpose of efficiently utilizing storage media and for cutting down the time required for transmitting original document information, redundancy reduction is essential. By means of modified Huffmann and modified Read encoding techniques, which are compatible with digital facsimile standards, it has been found that an A-4 size page of a scientific journal can be redundancy reduced to 50 kilobytes in average.

(6) High-speed document entry

In view of the fact that an online library has to be continuingly updated and enlarged, a high-speed document entry system is required. An experimental system has been developed which can enter an A-4 size page

of a scientific journal in 4 second in average. This system has the capability of allocating temporary indentification to each of the pages entered, for the purpose of organizing the permanent document file and coordinating with the secondary information file.

Based upon the above studies, and experimental system has been built for feasibility demonstration and performance evaluation. The experimental system ORDERS (Online Remote Document Entry-Retrieval System) consists of four major subsystems, namely, the original document retrieval subsystem, the bibliographic retrieval subsystem, the control subsystem and the remote terminal subsystem as shown in Fig. 2. The original document retrieval subsystem employs a direct-read-after-write (DRAW) type optical disk that stores original document information as well as a directory. The bibliographic retrieval subsystem employs magnetic disks that store secondary information including titles, abstracts, authors name and holdings of original documents. The retrieval functions of these subsystems are coordinated by the control subsystem which also controls communication to and from remote terminals via a digital data network. The remote terminal subsystem consists of keyboard-display for interactive bibliographical search, a facsimile receiver for recording original document pattern, and a remote terminal processor for coordination, signal processing and communication control. As an option, a facsimile transmitter is also added to this configuration to permit remote input of original document information.

An integrated database management system has been developed that combines an original document database, a converntional bibliographic database and a holdings database. A user interface has also been developed by which users can retrieve identification and holdings of the documents they need, and if the documents are stored in the original document database, can receive hard copies of the document through their terminals. After opening a session, a

user performs bibliographic retrieval by sending a SEARCH command, and if he wants holdings information, he sends a WHERE command, and in case that documents are held in the original document database, the user sends and OUTPUT command and gets the hard copies by digital facsimile.

The experimental system successfully demonstrated the feasibility of online libraries, although further develpment is required relative to high-capacity jukebox-type optical disk systems and above all, copyright issues need to be cleared to permit the proposed system operational.

5. Concluding Remarks

Information Technology is no doubt, one of the major factors for the implementation and operation of an integrated information utility which has been described. However, it is not the only factor, because no matter how the system is enormous in scale and sophisticated in technology, the utility's contribution to academic communities will be evaluated by the diversity, quantity, quality and authenticity of information the system can provide. In other words, the success of a project like this will depend very heavily upon the sustained and cooperative efforts of a great many librarians, database controllers and information scientists. It may be close to the end of the present century when the Science Information System could become full-fledged and could provide services which are truly useful to the university community in Japan.

Type		Example	Character Width	Keying Method	Notes	No. of Character
JIS C6220	Roman Alphabets	a b c	Half Width	Keys for the character are provided		158
	Alphabet Symbols	、 : #				
	Kana	ア イ ウ				
	Kana Symbols	" ° 、				
JIS C6226	Kanji	亜 以 伊	Full Width	Kana/Roman to Kanji conversion	For inputting Japanese materials	6,877
	Kanji Symbols	☆ ◎ ※		Input by JIS Code		
	Greek Characters	α β γ				
	Cyrillic Characters	а б в				
Extended Character Sets	Special Alphabets	æ ø ß	Half Width	Keys for the character are provided	For inputting Western vernacular spellings	685
	Alphabet with Diacritical Marks	á ä ç		Multiple keying of diacritical mark and alphabet		
	Alphabet with Double Diacritical Marks	a̋ ő ô				
	Isolated Diacritical Marks	¨ ˚ ¯			Used temporalily	

Table 1. Character Set for Cataloguing Workstation

Versions		Date of Survey	No. of Titles	No. of Holdings	No. of Participating Institutions
Union Catalogue of Serials in Europena languages	1982 Supplement	Aug.1980	8,100	75,000	489
	Humanities and Social Sciences 1980 Edition	Aug.1978	36,881	175,000	355
	Sciences & Technology 1979 Edition	Apr.1978	38,600	373,000	321
Union Catalogue of Serials in Japanese Language 1985 Edition		May 1983	40,237	979,434	623

Table 2 Union Catalogue Databases of Serials

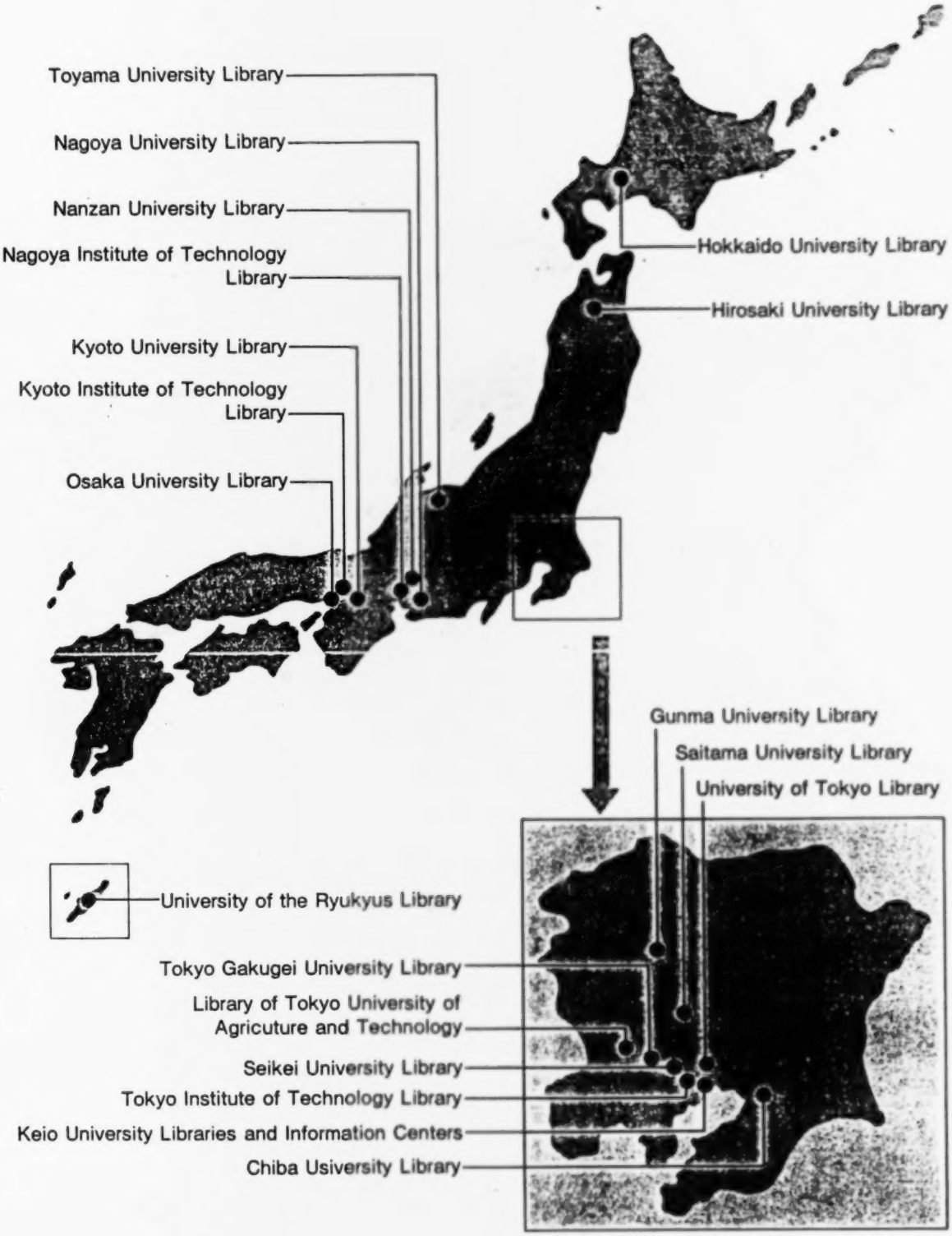

Fig. 1. University Libraries Connected Online to National Center for Science Information System

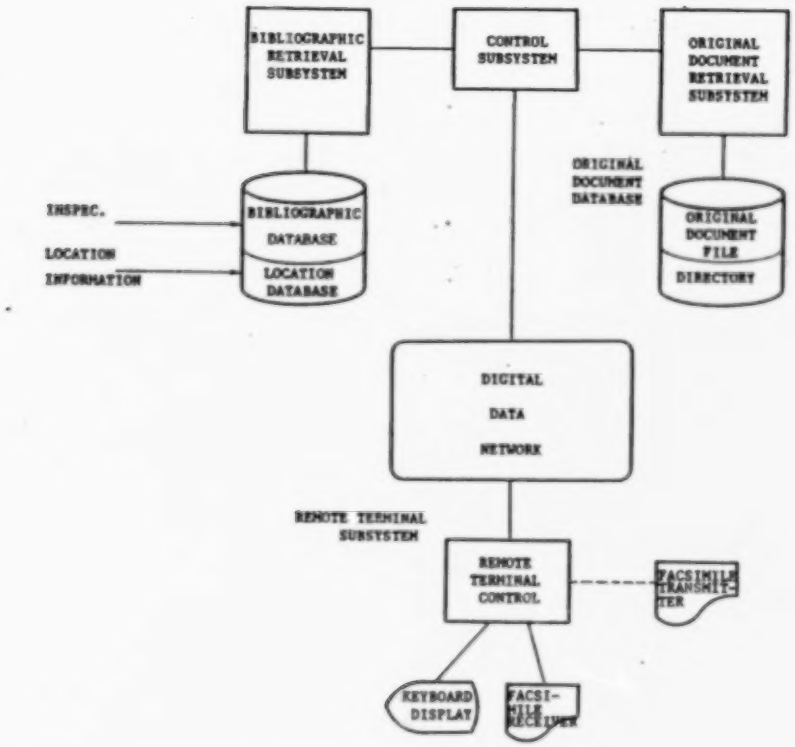

Fig. 2. General Configuration of Prototype System ORDERS

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The library and information dimensions of the North-South Dialogue: some thoughts on the threshold of the 21st century

by

Hedwig ANUAR

Director

National Library

Singapore

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The library and information dimensions of the North-South Dialogue: some thoughts on the threshold of the 21st century

by

Hedwig Anuar*

Mr President, I am deeply honoured to be invited to address you on this vital topic. A few preliminary words of caution are in order. First of all, we must bear in mind that the year 2000 is a purely arbitrary date because stages of history or development in any field of human endeavour do not fall neatly into decades or centuries or milleniums for the convenience of historians, planners, librarians - or speech-makers!

We must also recognise the difficulties and dangers of generalisations when we group the less developed countries (LDCs) into a single group of the South or Third World and the developed countries (DCs) into another group of the North. The former include the African, Middle Eastern, Latin American and Caribbean countries as well as the Asian and Pacific countries with the exception of Japan, Australia and New Zealand. These three countries are included in the group of developed countries of the North which also include North America and the Western and Eastern European countries.

Because the Third World constitutes such a vast part of the world, I shall confine myself mainly to the Asian continent and particularly to the Southeast Asian region with which I am most familiar. I personally believe that the South-South Dialogue is even more important

*The author is Director of the National Library of Singapore. The views in this paper are the writer's and do not necessarily reflect the views of the Singapore government.

than the North-South Dialogue. However, it would be too presumptuous on my part to speak of library and information services (LIS) in the non-Asian countries of the South without first-hand experience of them, so I hope my colleagues and friends in these countries will forgive me for any omission and errors.

It is not always realised that libraries in Asia were amongst the earliest in the world. Broadly speaking, one could say that their historical development covers four main phases. The first phase saw the establishment of royal and state archival collections of histories, genealogies, laws and other government records. Religious libraries of Buddhist and later of Hindu and then of Muslim scriptures and teachings were also developed, some of which became famous seats of learning, such as those of Nalanda and Taxila.

The second phase could be called the feudal phase, when private libraries were developed, first by royalty and then by government officials and the nobility, and later by rich merchants. These were gradually opened to the public but usually on payment of high fees. Collections of these early libraries which have survived the fall of empires, kingdoms and princedoms have been absorbed by the national, university and research libraries which succeeded them.

The library legacy of the third or colonial phase of library development was, with a few honourable exceptions, a very limited one. A number of special libraries were set up by administrators, scientists and researchers in key ministries and research institutes, particularly those concerned with agriculture, health, trade and the exploitation of natural resources as well as with law and order.

Missionary activity in the promotion of Christianity led to the study of indigenous languages into which the Bible could be translated and thus helped to develop early printing and publishing in these languages in a number of countries. Missionaries also set up schools, colleges and universities, at first with little or no support from colonial governments. Later, a limited number of such educational institutions began to be set up by colonial governments themselves in order to promote their languages and to train a minimum number of the colonised people to help operate the new socio-economic system efficiently. The libraries attached to these educational institutions were generally small and limited to works in the languages of the colonising powers.

Similarly, the few public libraries set up during the colonial period were usually subscription libraries, found mainly in the capital cities, and catering chiefly to the expatriate community as well as a small indigenous group who had learned or had been educated in the colonial language.

Since most countries were directly or indirectly under colonial influence, there were hardly any national libraries founded before World War Two except those of Thailand, Korea, the Philippines and China. Rich collections of manuscripts and printed materials generally found their way to the national and research libraries of the metropolitan powers rather than being retained and preserved in their countries of origin.

In this bird's eye view of the development of Asian libraries, one must bear in mind that these three phases of library history vary

considerably from country to country, stretching over many centuries in some cases, while starting only in the nineteenth or twentieth century in others. A striking feature of libraries during the first three phases of development is that, with few exceptions, they were elitist in nature, serving a small and privileged ruling class, whether religious or secular, indigenous or expatriate.

The fourth, post-independence phase of library development has been marked by the setting up of new libraries and the expansion of earlier ones, particularly university and special libraries. Most Asian universities are comparatively young institutions founded after World War Two to provide the education and training required for indigenous administrators, politicians and professionals who replaced the departing colonial powers. In the newly industrialising countries (NICs) of Asia, university libraries have generally made impressive improvements in terms of new buildings, collection development and technical services, many of them being pioneers in the computerisation of such services.

The number of special libraries has also increased enormously in keeping with the need to serve new agencies set up to meet new development needs in such fields as applied sciences, public administration, defence, foreign relations, economic planning, family planning, education, and a host of other subjects. Documentation centres, central banks, and standards institutions are included in this category. Some of the special libraries are amongst the most advanced libraries in Asia, providing a range of sophisticated services to administrators, professionals and technocrats.

Most Asian national libraries are also young institutions founded after World War Two. Most have legal responsibility for collecting and preserving the national literature and operate chiefly as research libraries and national bibliographical centres. Some also have responsibility for the development of government special libraries and for public library service, particularly for the capital city. Many are also increasingly involved in national, regional and international cooperative projects, including document supply, bibliographical control and the development of computerised databases.

Paradoxical as it may seem, public and school libraries which by definition are meant to serve the largest numbers of the population, have experienced slower and more limited development than other types libraries. Most public libraries are still subscription libraries, with membership confined to the more affluent or middle class. The best developed public libraries are those in urban and metropolitan centres such as Colombo, New Delhi, Bangalore, Hong Kong, Seoul, Singapore and other large cities. School libraries are gradually being provided in most Asian countries, particularly at secondary level, while class libraries are more commonly found at elementary level.

It is a remarkable feature of this fourth post-independence phase of library development that more libraries of every type have been set up during this period than during the whole of the duration of the first three earlier phases of library development outlined earlier. Yet any attempt to asses this achievement must take into account the fact that the elitist character of libraries has persisted, in varying degrees, through this fourth phase.

In order to understand why this is so, we must note that the majority of the libraries in the LDCs have had to overcome the handicap of their colonial origin or derivation. What has been called "the fatal impact of colonialism" involved not only various degrees of political and military conquest, economic exploitation and the breaking up of the existing social order. It also involved cultural, intellectual and psychological domination through the diffusion of the languages and cultures of the colonising powers at the expense of the indigenous languages and cultures.

Learning to read and write in the colonial foreign language was one of the obstacles to acquiring literacy. Furthermore, preliterate societies and those with limited literacy depended on traditional oral, face to face communication. Histories, genealogies, dynastic chronologies, laws and customs were handed down from generation to generation through "poetry, narrative, ritual incantation, praise and festive songs, wisecracks and proverbs...folk song and talks as well as tongue-twisters and riddles".[1] As pointed out by Jack Goody[2], S I A Kotei[3], Harry Kibirige[4] and Magnus John[5], such societies may view book reading with indifference, suspicion or even antagonism, as disruptive of traditional ways of life and a potential threat to the social status or class of the few able to read or write.

Nevertheless, despite such cultural and sometimes political barriers, most LDCs have given high priority to the attainment of literacy through the expansion of primary education as well as non-formal or informal adult education. Over the last thirty years, countries with such diverse social systems as Afghanistan, Brazil,

Burma, China, Cuba, Ethiopia, India, Indonesia, Iran, Iraq, Jamaica, Mali, Nicaragua, Pakistan, Papua New Guinea, Somalia, Syria, Tanzania, Thailand, Vietnam and Zambia have launched successful literacy programmes on a national scale.[6] The literacy rate for males in individual LDCs in 1980 ranged from a low of about 30 per cent to a high of over 90 per cent, with the rate for females being about fifteen per cent lower.[7] This compares with the world literacy rate in 1980 of 77 per cent for males and 66 per cent for females. Because of the overall increase in population, "by the year 2000, according to one projection, there will be about one billion persons who cannot read and write".[8]

While these figures are indeed alarming, one cannot assume that a literate society is a reading or information-conscious society or that a preliterate society lacked information, education and recreation or entertainment, all of which were conveyed orally. As Amadi asks, "Why should a strong oral tradition be considered problematic to librarianship rather than constituting excellent raw material for a systematic, professional and dynamic process of information packaging and retrieval?"[9] He has suggested, and countries such as Indonesia, India and Tanzania have already successfully carried out, the recording on tape of oral material by tribal and village elders, translating them into the national language or other regional languages and printing them in simple form. Folk songs, dances, festivals, village and street puppet shows and other forms of folk culture all provide material which would serve the dual purpose of preserving the national heritage and of promoting literacy in acceptable and non-threatening ways.

In addition to literacy, educational development is generally considered a prerequisite of library development. A strong oral

tradition, however, is one in which the principal learning technique is that of memorising or learning by rote. While education at first level is generally conducted in the national language or languages, education at second or third level may be conducted in one of the former colonial languages, English, French or to a lesser extent, Spanish, now accepted as international languages. Textbook provision in the first and second languages of instruction at the rate of at most one basic textbook per subject encourages the continuance of learning by rote. Reproducing what has been learned in this way is necessary to pass examinations, often the sole criteria of educational success for both students and teachers. Added to this is the cultural attitude of unquestioning acceptance of the teaching authority and the absence of individualised instruction owing to large classroom size. Thus access to education does not necessarily result in the encouragement of reading and the use of libraries, even at university level.

Turning to the question of publishing in the Third World, we should note that "almost all Third World nations entered the post-World War II period without the basic infrastructure of publishing, though branches of metropolitan publishers existed in some countries. In other cases, textbooks were imported from the metropole. Indigenous publishers were rare, and national educational authorities had little expertise in book production and distribution. All of the requirements of a modern publishing system - printing facilities, a distribution apparatus, competent editors, and the like - had to be developed almost from scratch. The inheritance of colonialism was one of dependence on a foreign country."[10]

The problems of publishing in the Third World, particularly in the smaller countries, include "a multiplicity of local languages, few of which are well developed for publishing purposes; a lack of both the infrastructures and personnel for publishing; much illiteracy; a very limited market for books; and domination of small local book markets by externally controlled multinational publishers".[11]

It is this dominance of multinational publishing which is particularly crucial in the fields of scholarly and textbook publishing and which "gives Western publishers a key role in the cultural and ultimately economic, life of many Third World nations."[12]

Goonatilake,[13], [14] Abdur Rahman[15] and Eisemon,[16] for example, have highlighted the problems of Third World research scientists who, as with researchers and scholars in other fields, work in isolation and are largely unrecognised because their work is unpublished in western journals and therefore is not indexed or abstracted by so-called international databases which are really western in coverage.

Textbook publishing is essential to meet the need for a national orientation, particularly in the social sciences, and also helps to build up the expertise and resources needed to develop general publishing. It is heartening to note that the World Bank is now providing assistance to countries such as Indonesia and the Philippines in this field.

Joint ventures, co-publishing, granting of reprint and translation rights on more generous terms (which would also help to reduce piracy), lower prices for paper and printing equipment, training of writers, editors, translators, illustrators, printers and publishers

are some of the ways in which DCs could help the LDCs develop their indigenous publishing industries, working through and with Unesco and regional centres for book development in Asia, Africa and Latin America, the Asian Cultural Centre for Unesco here in Tokyo and national book development councils.

When one is on the threshold of the twenty-first century, one cannot of course omit some discussion of information technology. As this will be dealt with in far greater depth in other sessions of this conference, I shall deal very briefly with a few of the opportunities and threats it presents to both developed and developing countries. Apart from LIS, information technology is already being used by a number of developing countries in various fields, such as aviation, banking and financing, education, health, engineering, traffic control, engineering and many other areas. A few examples: a satellite communications system links up staff and students at Indonesia's Eastern Islands University Association in twelve campuses spread over sixteen hundred miles;[17] work is being carried out on machine translation of Chinese, Malay and other Asian languages; teletext services are used in Hong Kong, Singapore (SBC Text) and Malaysia (Beriteks); electronic mail, teleconferencing and electronic funds transfer at point of scale (EFTPOS) are available in Singapore, which has set up software development centres and, more recently, an IT Institute.

In the LIS field, India, South Korea, Hong Kong, Taiwan and Singapore are amongst the many NICs which subscribe to online databases and operate computerised library operations in many of their academic

and special libraries. National libraries of Thailand, the Philippines and Malaysia have computerised their national bibliographies and union catalogs, while Singapore has launched SILAS, a national bibliographic network based on the National Library. Many more LDCs throughout Asia, Africa and Latin America also participate in regional and international bibliographic and non-bibliographic databases established with the help of Unesco, other UN agencies, and international aid agencies such as the International Development Research Centre. A number of libraries and research institutes in China, South Korea, India and Malaysia are also developing their own databases as well as software for microcomputers used in libraries.

The products of the information/communications industry, include the publishing industry, the international news agencies, online databases, satellite data transmission, electronic publishing, teleconferencing, artificial intelligence (AI) or expert systems, and CD-ROM, to mention just a few, which are all controlled by a few developed countries. It has been estimated, for example, that "the American information industry has eighty per cent of the international sales of computer hardware, software and information products and services".[18] Major issues such as the allocation of the radio frequency spectrum, the control of the geostationary orbit for communication satellites and transborder data flow (TDF) have been and will continue to be the subject of intense debate. Not only developing countries but developed countries such as the EEC share in the concern for the protection and..."integrity of data vital to national security or national economic or political stability".[19]

The great disparities in wealth and other resources make comparative assessments based on quantitative standards invidious and irrelevant when the poorest LDCs have not yet been able to meet the basic needs of food, clothing, shelter and health. Few comparisons between LDCs of similar geographical size, population, economic level and so on appear to have been made, but would probably be more fruitful and provide greater insights than comparisons between DCs and LDCs. Qualitative standards and performance or output measures offer more promise of being workable and useful provided they are based on the principle of service to the greatest possible number at the least possible cost. From the user's point of view, the distinctions between different types of libraries or information-providing institutions are unclear and unimportant. It is the end product in terms of the item of information itself or the container of information - be it a person, book, microfilm, video cassette tape, magnetic tape or whatever - that is required. Furthermore, the distinctions between the different types of libraries will become increasingly irrelevant and meaningless with the spread of the use of information technology.

In these hard times, librarians of developing countries cannot do better than to practise "the librarianship of poverty"[20] by formulating and implementing realistic LIS policies and standards in the light of their priorities and resources. They will also have to guard against the overhasty and uncritical transfer and adoption of information technology when limited resources must be stretched to provide maximum social benefit. On the part of the developed countries "care must be taken not to assume that technological superiority is transferred to political, cultural or informational superiority".[21] It is

vital to the interest of both countries of the North and of the South to keep their dialogue open, and to recognise their interdependence. Their biggest challenge will be to make intelligent and creative use of technology so that the world may be a little more peaceful, a little better and a little happier when we enter the twenty-first century.

References

1 Amadi, Adolphe O. African libraries : Western tradition and colonial brainwashing. Metuchen, N.J. : Scarecrow, 1981.

2 Goody, Jack and Ian Watt. The consequences of literacy. In Literacy in traditional societies / edited by Jack Goody. Cambridge : Cambridge University Press, 1968.

3 Kotei, S. I. A. Some variables of comparison between developed and developing library systems. Int Libr Rev. 9 : 249-267 ; 1977.

4 Kibirige, H. M. Libraries and illiteracy in developing countries : an assessment. Libri. 27 : 54-67 ; Mar. 1977.

5 John, Magnus. Libraries in oral-traditional societies. Int Libr Rev. 11(3) : 321-339 ; July 1979.

6 Unesco. The struggle against illiteracy throughout the world : some successful experiments between 1971 and 1980 and future prospects. Paris : Unesco, 1983.

7 World statistics in brief : United Nations statistical pocket book. 9th ed. New York : United Nations, 1985.

8 The world of literacy : policy, research and action. Ottawa : International Development Research Centre, 1979.

9 Amadi, Adolphe O., op. cit.

10 Publishing in the Third World : knowledge and development / edited by Philip G. Altbach, Amadio A. Arboleda, S. Gopinathan. Portsmouth, N.H. : Heinemann ; London : Mansell, 1985.

11 Ibid.

12 Ibid.

13 Goonatilake, Susantha. Crippled minds : an exploration into colonial culture. New Delhi : Vikas, 1982.

14 Gonnatilake, Susantha. Aborted discovery. London : Zed Books, 1985.

15 Abdur Rahman. Intellectual colonisation : science and technology in West-East relations. New Delhi : Vikas, 1983.

16 Eisemon, Thomas Owen. The science profession in the Third World : studies from India and Kenya. New York : Praeger, 1982.

17 Teleconference links in Indonesia. Outlook Res Libr. 8(2) : 6 ; Feb. 86.

18 Galvin, Thomas T. Trends and issues in the international library and information communities. In Bowker annual of library and book trade information. 30th ed. New York : Bowker, 1985. p. 69-75.

19 Ibid.

20 Mchombu, K. J. On the librarianship of poverty. Libri. 32 : 241-250 ; Sept. 1982.

21 Suprenant, Thomas T. Global threats to information. Annu Rev Inf Sci Technol. 20 : 3-25 ; 1985.

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The Library and the Times

by

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The Library and the Times

I must confess first of all that I had only been concurrently the director of the Sun Yatsen Library at Yanan which is a sort of public library, in the early ninteen forties, and also the director concurrent of the Central Library of the Chinese Communist Party in the late ninteen forties, and had been for a rather short period in early ninteen fifties the professor in the Department of Library Science in Peking University. Then, for the succeeding thirty-five years up to date I did none of library work, nor any more research on library science. Therefore, may I beg of you, ladies and gentlemen here at this conference, not to regard me as someone expertised in library science, but to pardon an enthusist of library service in China and in the world for his lay-man's language as well as his over-abstract words which might prove of not much avail to the theme of this conference. That, however, is all I can do within my ability. Still, I am pleased to take the opportunity of IFLA's kind invitation to say something here to express my concern over librarianship, to tender my good wishes to the IFLA, and also, to air some of my views.

We have as the title of this conference "The New Horizons of Librarianship Toward the 21st Century", the "21st Century" here without doubt conveys a notion of time. Counting up from today, we will have only thirteen years and one hundred and thirty days to go before the first day of the twenty first century. Of this approaching era I presume we already have in mind some clear comprehension. Therefore, I guess, by choosing "The Library and the Times" as my subject of speech, I might not deviate too much from the main theme of this conference. My basic consideration in choosing this subject is as follows: Firstly, library itself came into being at definite times in the course of historical development of humanity; then, library develops with the development of times; owing to its specific social function the library must

adapt itself to the times, must serve the needs of the times, and contribute to the development of the times; keeping in step with the progress of the times the concrete contents of library's social functions will duly see new pioneering, new inventions and new heights; the new times will put forward new demands before the library and there is no choice for the library but to make use of the progress of the times to become competent either in the scale of service, in organization, in techniques, in way to serve, in quality of service, or in the guideline for philosophy of library service on the whole; library culture, including the research of library science and techniques of library management, will also enter the 21st century along with the progress of the times, so will our library undertakings of the world as a whole, emerge with a quite new look. Its development in the new century will be unlimited.

Then, in discussing such a problem as "The Library and the Times" we inevitably have to investigate into the concept of "books".

Today, at a time when concepts of information and carrier of information have already been widely used and a variety of new carriers are being invented, it seems opportune not to define the term "books" in the olden concept, but appropriately as "information carriers". Though such a definition should be able to stand without problem, yet it is also true that not all information carriers are books, because for a book to be an information carrier it should possess of more properties. I believe, for a book to be called an information carrier, the first required property is to be able to carry information by a long term instead of ephemerally. Linguists have said that language is the material shell of thought. It holds true for any kind of language, including mathematical language and computer language. Therefore language is also a carrier of information, only it does not carry information for long, it vanishes in a wink of time, it thus cannot be regarded as a book. In the same way, ray radiation and electromagnetic wave, the usual carriers of information,

can neither be regarded as books. No matter how enlarged is the modern concept of "books", any material carrier of ephemeral nature (such as ray radiation and electromagnetic wave) or any other carrier having barely a materialistic character (such as language) cannot be called a book. To be a book, the carrier must be material in the general concept of matter, and at that, must be a visible material body which could be preserved for a considerable long period. Paper which has words, signs or pictures printed on it, magnetic tape, laser disc, etc. are such kind of material. (note 1)

Another example to further illustrate the above-mentioned idea is the classroom blackboard which could be used for writing just like the paper, and could hold the same contents of the book, the periodicals and newspapers. However, a blackboard is not made to hold information for a long time, it is made to hold written words which are to be erased shortly. So a blackboard cannot be a book. Only the material body which carries information and is preservable for long periods could be a book.

Secondly, any material body having merely the property of carrying information for a long time is still not necessarily qualified as a book. For instance, a building carries on it information, and is itself a material body carrying information for a long time, but a building is never regarded by men as a book, and it is correct in so doing, because there is yet the second required property for a book to be an information carrier.

I am afraid here I have to say something more about the point of information and information carrier. Information might be an attribute of some native substance born of nature, for instance, the light emitted from a fixed star beyond our solar system communicates to men the information of the presence of certain fixed star seated at certain location in the outer space, along with the information of its geometric, physical and chemical status. Then, information might also be an attribute of men's social practice. In view of the universality of information,

a great many material bodies could be regarded as the material carriers of information. A building may impart to men such knowledge as the guiding thought for building it, the then popular trend and artistic taste and the level of production of its time. Therefore when a receiver of information faces this building, its attribute of information carrying is already shown and quite rich information at that. Further deduction will reveal that all of the historical relics are disclosing to us information of their times. Today's relics are no relics in their own days, but some objects satisfying the needs of their society. Similarly, objects in use today will become relics when they lose their use value in the future. They will then become the material body carrying information of the present era. Should all these be taken for books, the concept of book will become boundless.

Therefore, as a carrier of information, a book should possess of the property of carrying densely packed information. That means great loads of information should be carried by this material body per unit volume or per unit weight. This property of carrying densely packed information is usually accompanied by other related properties like easy-carrying and easy-accumulating. For a material body to possess of these properties, full use must be made of various languages, words, signs and pictures, as well as specific materials which are suitable to have the various languages, words, signs and pictures printed or recorded on them. Having grasped the meaning of the second property of book as information carrier, we might understand why following the invention and improvement of paper-making technique and printing technique has the printed matter become the chief form of book; why was the appearance of book collection and later the appearance of library in modern sense made possible at all, and why there appeared in the contemporary era such types of books like microfilm, microfiche, magnetic tape, laser disc, etc. which carry many times the information hold by a printed matter and why these are enjoying an evergrowing importance in the whole

realm of books. The above-mentioned properties of book as information carrier have much to do with the popularization and wide dissemination of books.

Nevertheless, if we stop right here, we still have not well illustrated the problem "what is a book", because an information carrier having the above two properties could still not be a book. Documents, manuscripts, records, technical drawings, journal of accounts, printing plates, photographs, films, magnetic tapes, video tapes, gramaphone records, laser discs, etc. which are prepared for immediate needs of business operation are not books the moment they are prepared. These information carriers are not books the time they are formed, but they could be turned into books when they should be needed afterwards as reliable source material for investigating the procedure of certain transaction and certain historical background.

Therefore there is the third property requisite for an information carrier to be called a book, the property to be measured by its social function. A book must be meant for reading and usage by the general public, or in the least, though limited in scope, is still used by a quite considerable number of people. A book should be the medium for mass dissemination with the function of spreading to the society the information it carries and thus exercises influence on the society.

Books as information carriers should at least possess of the above three properties, though I do not think this generalization complete, not to mention satisfactory. Such a problem has very possibly long been solved by library circles of the world, but to me it is still an object for thinking. (note 2). I believe a clearer analysis of this problem will be helpful in the construction of library and in the development of library service according to the needs and conditions of the time, and no doubt will also be helpful in such related transactions as publishing, distribution, etc.

The library is established on the basis of these properties possessed by books as information carriers. Having cumulated a vast amount of books, the library becomes a storehouse of informative knowledge of huge capacity. Meanwhile, with its tremendous holdings a library can render an active service for its books to fully exercise their social function, while assuming its own social function of disseminating information to the public. Of course, the concept of function of books differs from that of the function of the library, besides the fact that the book does not always fulfill its function through a library. Nevertheless, for two reasons library's function in giving full use of books is very effective and this function is extending with such a speed that proper estimation is sensible. The two reasons are: firstly, the great amount of the library's holding would include a large number of books not easily obtained elsewhere, if supplemented with a sound interlibrary loan, or even international loan system, a much greater variety and amount of books could be made available to the public; secondly, based upon long years of experience a highly active reader service system has already been in the run. It is noteworthy that up to the later half of the 20th century the demand for information and the increase in volume of information in developed countries have boomed to the amazement of those who prefer to measure things with old yardstick. Whileas in developing countries the progress has also been prominent. People nowadays like to talk about the "era of information" and the arrival of an "information society." These terms, though not so correct, strictly speaking, (note 3), yet have brought forth an important characteristic of the development of the contemporary era. When entered into the 21st century this characteristic is bound to see further development. In such an era, library's function in offering full utilisation of books will boost furtner, either in absolute quantity of books utilized, or in relative instances where books are utilized not through the library channel. (note 4).

When talking about the full utilisation of books, we unavoidably will consider first the contents of books.

A book is the product of its time, and is supposed to provide utility during its time. The writer, editor and publisher of a book inevitably writes, edits and publishes for certain need of the contemporary period, for positive or negative need. A book would usually be filled with the spirit of its time and reflect the contemporary society. Even a book on ancient history written with a view to restore ancient ways would reveal the trend of restoring ancient ways in society during the time the book is being written. A book may perform the function of helping its reader to acquire more knowledge. Books serving progressive function to the society, which would compose an absolute majority, can exercise an educational function to public. In a sense, all books may have the function of providing source materials for research. Reading is also a need of the people for cultural activities. Reading satisfies this need, in this way the book is also serving its time. This is the direct service. The social effect produced by the direct service, however, is far more important. Even so, this function of books is realized only when they are disseminated among the contemporaries, the wider the dissemination, the greater the function.

We must also notice that books have the ability to function beyond their time. This function is realized only when the book is preserved to pass on to posterity. With the exception of the few who quite aware of the inutility of their works, purposefully write for posterity, most authors are unconscious of the after-effect, though their works in fact will strongly influence the posterity. Because of contemporary needs, people commonly make use, and profusely at that, of books of the bygone times, which are thus made to serve the present era.

Librarians being persons living in the present era, they naturally have their own points of view, even political viewpoints, so they inevitably will have their own opinion regarding the contents of books. However, my idea is for the library to assume basically an unbiased attitude toward the provision of books of different contents, instead of assuming the role of referee of books. Of course, for the

library to perform the "fountain of wisdom", the librarian can and ought to do what he deems proper in recommending to readers what is beneficial to the progress of the society. Therefore the librarian should, like his contemporaries, try to learn the needs of the time, in order to serve well the positive needs of the society.

In order to give full utilization of books, competent provision to a library is indispensable. To aggregate a great number of books without missing any that could be obtained (including titles learned from other libraries) is always an important task in library construction. This task will become more difficult as the quantity of books in the world increases along with the progress of the time. But the library will be handicapped by lack of information, limit of funds, need for floor space and competent personnel. These difficulties are shared by various other countries, though differ in degree.

Another aspect of the problem is to do a good service. Owing to the ever developing library technology, to be properly furnished with the latest equippments will become vitally important for the library to improve its service. This factor emerged as a dominant fact in the acheivements in library progress in the last two or three decades. In developing countries, there had also been demands for the library progress to keep pace with the country's economic strength. As a matter of fact, the said progress is not bound within the wall of the library, it necessarily is closely related with the development of communication technique of the whole society.

Certainly, in pursuit of a good service, it is not enough to merely solve the problem of "hardware", the "soft ware" should also be given priority to forge to the fore front of the times. My appreciation for UAP, universal availability of publication, advocated by IFLA, is based on this point of view. I believe the progress made in substance similar to software will greatly uplift the horizon of library service, and such uplift would by no means confine in any individual library, but will be applicable to all. Chinese library workers have discussed

problems along this line at their symposiums and have had papers written on this topic. (note 5). I sincerely hope that IFLA might host more discussions on such topics. Software no doubt needs hardware as its material foundation. As for developing countries under the circumstance of lower level in hardware, supplementary measures are preferrably to be sought in order to uplift their library service.

I will stop here on the topic of "The Library and the Times" according to my time limit. To save some time I will not read here the several notes I wrote for this speech. Now, as a participant from the People's Republic of China I would like to wind up my speech by breifly introducing some tentative plans of Chinese library profession toward the 21st century. The Chinese Library Society had organized scholars to write down their opinion on the subject "Development of Chinese Library Undertakings and the Deficiencies Compared with Outside World", and the articles written had been compiled into a monograph. There were put forward such observation that international library cooperation and rescource sharing will be an outstanding challenge to Chinese library profession in the year 2,000. (note 6). Also there was the suggestion to strive to lessen the discrepancy between China and developed countries in respect to library education, automation in book and information handling, adoption of new techniques and utilization of non-printed materials. The construction of the new building for National Library of China is presently going on with faster speed, and is estimated to be nearing completion the next summer when the service of the National Library of China will expect to make greater strides toward a new horizon. As Chinese library circles arduously devote themselves to their historical task -- to contribute to the building of a modernized socialist China with her own characteristics, they are at the same time ever ready to take up their bounden duty for the cause of international library service. We look upon the cause of international library service as our own cause. We ardently wish to

receive substantial aid from library circles abroad, for developing China's library service. Though I am presently not engaged in any particular post in a Chinese library, yet I believe my speech may represent the thoughts and feelings of the Chinese library circles.

Thank you very much !

Note 1. Einstein's discovery of the theory of relativity broke the absolute demarcation between mass and energy, found out the two states of matter, the mass with static property and the energy without static property, and he also predicated the inter-transformation between them under definite conditions. A part of mass is called substance which differs from the molecule, atom and elementary particle that make up the substance itself, and also differs from the celestial body or cosmic island which are made of substance. Books, films, fiches and tapes which we usually come across are all substance.

Note 2. The answer to "what is a book?" is generally known, but I would deem it necessary to further analyse it, because the clearer this question is expounded, the better can we understand our task regarding books. This question has not been satisfactorily resolved in the foregoing context, it seems not so easy to do it. More effort is needed to resolve this not so important question. The method is to compare the book with something which is similar to the book but is not a book. On the First Symposium on the Science of Archive Management held in Beijing in November 1981 I spoke on the subject "Science of Archive Management Is an Important Branch of Learning" in which I quoted as follows the 118th paragraph of Hegel's "Logic": "...comparison has a meaning only upon the hypothesis of an existing difference, and that on the other hand we can distinguish only on the hypothesis of existing similarity. Hence, if the problem be the discovery of a difference, we attribute no great cleverness to the man who only distinguishes those objects, of which the

difference is palpable, e.g. a pen and a camel: and similarly, it implies no very advanced faculty of comparison, when the objects compared, e.g. a beech and an oak, a temple and a church, are near akin. In the case of difference, in short, we like to see identity, and in the case of identity we like to see difference." So I think when studying library science, it is better to refer to a variety of information carriers similar to books, and thus to clearly specify the required properties of a book.

Note 3. In my opinion, the terms "information era" and "information society" are not so correct, because any other society or any other era could neither be devoid of information. The precise presentation should be "information developed era" and "information developed society". But the rules for coining terms usually tolerate such imprecision. Provided with relevant explanation, such terms should be allowed.

Note 4. This opinion of mine is optimistic about the library development. There is a view among international library circles that the development of information devices during the "information era" will dismiss the library as a channel for the book to perform its function. I do not believe in such a prospect, because even if terminals come into many households and offices, the library with its huge collection of books, will still be needed as a storehouse and service center. When it comes to that time, it is not the "extinction" of library but the change in style of library service. Eventually, it will be a matter of remote future for developing countries to have terminals popularized to such a level. Even in the highly developed countries, cool-minded calculation will tell us that such popularization might not be seen in the early years of the 21st century.

Note 5. I have on hand an article "UAP and Present Status of China" by Mr. Shao Wenjie of National Library of China, in which the author perceives that "There is serious difficulty in putting into practice the UAP either in

China or in the world, as we have yet a long way to go. However, as long as we are making progress, we are nearer to our target." The author also maintains that in order to prevent the UAP from becoming an Utopian imagination, feasible measures must be taken at each step from the production of a publication to its actual using, and at different levels within a country and among countries. Besides the grassroot institutions like publishers, libraries and information centers, all administrative units in charge of publishing enterprises, libraries and information centers, as well as associations of publishing enterprises, libraries, information centers, etc. of all countries should seriously take up each one's responsibility. Similarly, on the international scene, the UNESCO, IFLA, UNISIST, etc. should undertake greater responsibilities.

Note 6. This is expressed by Tan Xiangjin, vice-president of Council to China Society of Library Science in his thesis.